

**ABSTRACT OF THE DISCLOSURE**

A cathode plate of field emission display comprising a cathode substrate of the field emission display having a thickness and one or more in-laid linear isolation barriers formed within the thickness of a top surface of the cathode substrate. The one or more in-laid linear isolation barriers are adapted to contain electron emitter lines, wherein the one or more in-laid linear isolation barriers provide field isolation between respective ones of the electron emitter lines. In one embodiment, the in-laid isolation barriers comprise trenches. In some embodiments, portions of the top surface in between in-laid isolation barriers are adapted to contact gate wires of a gate frame positioned over the cathode substrate in order to dampen driving frequency vibrations in the gate wires.

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